

Applic. No. 10/812,554
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REMARKS

Disposition of Claims

Upon entry of the foregoing amendments, claims 1 and 3-10 will remain pending in the application and stand ready for further action on the merits. Independent claim 1 has been amended herein to recite that the array of optoelectronic devices is hermetically sealed by the lens array. Claim 2 was canceled in the previous amendment. Claims 3-4 as originally presented are dependent on Claim 1. Claim 5 has been rewritten in independent form in accordance with the allowable subject matter detailed in the Examiner's Office Action dated February 24, 2005. Claims 6-10 are original and are dependent on Claim 5. The amendment to claim 1 is fully supported by the Specification particularly at Paragraph 28. No new matter has been added to the application.

Rejection Of Claims 1, 3, and 4 Under 35 U.S.C. § 102

The Office Action rejects claims 1, 3, and 4 under 35 U.S.C. §102(b) as being anticipated by Sauter et al., U.S. Patent 5,945,775 ("Sauter '448"). As discussed above, independent claim 1 has been amended to recite that the array of optoelectronic devices is hermetically sealed by the lens array. Applicants submit that Sauter '448 does not anticipate the present invention, as recited in amended claims 1, 3, and 4, for the reasons discussed below.

Applicants agree with the Examiner that Sauter '448 is directed to packaging for vertical cavity, surface-emitting lasers (VCSELS) and corresponding photodiode detectors. Referring to FIG. 1 in Sauter '448, the package (10) for the VCSEL laser array (30) is enclosed in housing (12). The MT optical connector (18) has an enlarged front block (20) with a pair of blind holes (22, 24) into which the guide pins (26, 28) are inserted there through. The alignment of the lasers with the input ports of the MT connector occurs by means of the guide pins (26, 28) which extend through the backing plate (36) and alignment holes (38, 40). An electronic drive controller (42), which provides the signals to the VCSEL array, is mounted on a printed circuit board (PCB). Lasers

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on the VCSEL chip are also connected to the printed circuit wiring by wire bonding pads. (See col. 3, lines 9-15.) As the Examiner points out, a fiber optic feed-through assembly (56), which is made of Kovar, may be used.

In the illustrated example of FIG. 4, the housing is assumed to be aluminum in order to accommodate for the differential expansion and contraction of aluminum and Kovar in a hermetically sealed package. It is necessary to join the aluminum and the Kovar in an appropriate manner. One way of doing this would be to provide aluminum Kovar bimetallic shims 82,84 wherein the shaded portion of the shim represents aluminum, and the white portion represents Kovar. The shim is made by explosively bonding the two metals together. The package may then be sealed by laser welding components together at the welds 86,92. (column 3, lines 65-67 - column 4, lines 1-8).

However, there is no disclosure or suggestion in Sauter '448 for hermetically sealing the VCSEL array with a lens array. In FIG. 4, the aluminum housing (12) and fiber optic feed-through assembly (56) are hermetically sealed together, and the package may be sealed by laser-welding. But, the packaging shown in FIG. 4 does not contain a lens array for hermetically sealing the array of optoelectronic devices as presently claimed. In summary, it is submitted that Sauter '448 does not disclose each and every element of amended claims 1, 3, and 4 as required by an anticipatory reference. Accordingly, it is respectfully requested that the rejection of claims 1, 3, and 4 (as amended) under 35 U.S.C. § 102(b) in view of Sauter '448 be withdrawn.

Rejection Of Claims 1, 3, and 4 Under 35 U.S.C. § 103(a)

The Office Action further rejects claims 1, 3 and 4 under 35 U.S.C. § 103(a) as being unpatentable over Sauter '448 and Giboney '302. Claim 2 has been canceled and its limitations have been incorporated into amended claim 1. Furthermore, Claim 1 has been amended to recite that the hermetic sealing of the array of optoelectronic devices is accomplished with the lens array itself. The Sauter '448 and Giboney '302 references, discussed in detail above, do not

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suggest that the lens array itself may be used to hermetically seal the array of optoelectronic devices. Therefore, it is put forth that the invention of the present application would not be obvious to one skilled in the art in view of Sauter '448 and Giboney '302 patents. Claim 4 is dependent upon amended claim 1, and it is believed that claim 1 is in condition for allowance for the reasons discussed above. Thus, claim 4 also should be allowed.

Allowable Subject Matter

Applicants acknowledge that claims 5-10 contain allowable subject matter and have amended Claim 5 to be in independent form in accordance with the Examiner's Office Action dated February 24, 2005.

Conclusion

In summary, Applicants submit that claims 1 and 3-10 (as amended) are patentable and each of the Examiner's rejections and objections has been overcome. Accordingly, Applicants respectfully requests that the amendment be entered and favorable consideration and allowance of amended claims 1 and 3-10.

The Commissioner is hereby authorized to charge any additional fee required in connection with the filing of this paper or credit any overpayment to Deposit Account 02-0900.

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Should there be any outstanding matter that needs to be resolved in the present application, the Examiner is invited to contact the undersigned at the telephone number provided below.

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